

REMARKS

The specification has been amended to correct minor errors. A marked up version of the amended paragraphs of the specification is attached hereto pursuant to 37 C.F.R. § 1.121(b)(iii). Claims 1-4 have been amended for clarity. A marked up version of the amended claims is also attached hereto pursuant to 37 C.F.R. § 1.121(c)(ii). New claims 5-12 have been added. Thus, claims 1-12 are presently pending in this application for consideration.

The amendments to the present application are made to place the application in better form and to place the application in condition for allowance. No new matter has been added. Entry and consideration of these amendments prior to the first Office Action are respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at Los Angeles, California, telephone number (213) 337-6742 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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Version with markings to show changes made:

IN THE SPECIFICATION:

Please amend the paragraph on page 2, starting at line 18 as follows:

It is therefore an [object] advantage of the present invention to reduce even further the power consumption of the digital still camera by reducing the power consumption of the above-mentioned voltage booster circuit.

IN THE ABSTRACT:

Please amend the original Abstract of the Disclosure as indicated below.

[The power consumption of an image pickup apparatus using a solid-state image pickup device is reduced. At the termination of a readout period of an information charge from a CCD image sensor (2), a timing generator (8) stops voltage booster pulses for boosting the output voltage of a power supply (6). As a result, a driver (4) stops operation and the power consumption required to drive the CCD image sensor (2) basically stops. Thereafter, as the electronic shutter operation approaches, the timing generator (8) resumes the generation of the voltage booster pulses and the voltage of the power supply (6) is boosted. On the basis of the exposure condition of the previous field, a DSP (16) obtains the timing for the electronic shutter for the next field, and further the timing that has been advanced only for the period required for voltage boosting set in a register, and starts the voltage boosting operation from this advanced timing. The voltage booster pulses are consecutively generated in the voltage booster period to rapidly raise the voltage of the power supply (6)] A solid-state image pickup apparatus is provided having a solid-state image pickup device for generating an information charge in response to an image of which light was received, a drive circuit for transferring the information charge accumulated in the solid-state image pickup device, and outputting the information charge, a power

supply for generating a predetermined voltage in accordance with an input amount of voltage booster pulses and supplying the predetermined voltage to the solid-state image pickup device and the drive circuit and a pulse generator circuit for generating and supplying the voltage booster pulses to the power supply. The pulse generator circuit stops generation of the voltage booster pulses in accordance with a termination of an information charge readout operation of one screen pickup period from the image pickup device, and when the drive circuit executes an electronic shutter operation, which discharges the information charge that has accumulated in the solid-state image pickup device to resume accumulation, the voltage booster pulses are generated over a predetermined voltage booster period prior to the electronic shutter operation at a higher frequency than the information charge readout operation to boost the voltage of the power supply.

IN THE CLAIMS:

Please amend claims 1-4 as indicated below:

1. (Once Amended) A solid-state image pickup apparatus comprising:
 - a solid-state image pickup device for generating an information charge in response to an image of which light was received;
 - a drive circuit for transferring [said] the information [charges] charge accumulated in [said] the solid-state image pickup device, and outputting [said] the information charge;
 - a power supply for generating a predetermined voltage in accordance with [the] an input amount of voltage booster pulses and supplying the predetermined voltage to [said] the solid-state image pickup device and [said] the drive circuit; and
 - a pulse generator circuit for generating and supplying [said] the voltage booster pulses to [said] the power supply;

wherein [said] the pulse generator circuit stops generation of [said] the voltage booster pulses in accordance with [the] a termination of [the] an information charge readout operation of one screen pickup period from [said] the image pickup device, and when [said] the drive circuit executes [the] an electronic shutter operation, which discharges the information charge that has accumulated in [said] the solid-state image pickup device to resume [the] accumulation, [said] the voltage booster pulses are generated over a predetermined voltage booster period prior to [said] the electronic shutter operation at a higher frequency than [said] the information charge readout [period] operation to boost the voltage of [said] the power supply.

2. (Once Amended) The solid-state image pickup apparatus according to claim 1 wherein:

a shutter timing is set for performing [said] the electronic shutter operation [in] at a subsequent [said] screen pickup period in accordance with an exposure condition in an arbitrary [said] image pickup period; and

a start timing is set for starting to performing [said] the voltage boosting operation prior to [said] the shutter timing by a predetermined time at least as long as [said] the voltage booster period.

3. (Once Amended) The solid-state image pickup apparatus according to claim 1 wherein:

a shutter trigger pulse having a predetermined pulse width at least as long as [said] the voltage booster period is used;

[said] the voltage boosting operation is initiated in connection with [the] a timing of [the] a leading edge of [said] the shutter trigger pulse; and

[said] the electronic shutter operation is initiated in connection with [the] a timing of [the] a trailing edge of [said] the shutter trigger pulse.

4. (Once Amended) The solid-state image pickup apparatus according to claim 1 wherein:

[said] the stop operation of [said] the voltage booster pulse circuit is prohibited when [the] a start timing of [said] the voltage boosting operation precedes the termination of [said] the readout period of [said] the information charge.